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ABSTRACT

In 1964, the Engineers' Council for Professional Development appointed a standing subcommittee to establish a basis for accrediting programs of technical institute type--now designated as engineering technology. Curricula in the following educational institutions were considered: technical institutes (endowed or publicly supported), junior colleges, colleges of technology, divisions of colleges and universities, and proprietary schools (operated by individuals or corporations). Curricula were evaluated both qualitatively and quantitatively. Such factors as experience of faculty members, teacher-student ratio, records of graduates, curricula offered, graduation and admission requirements, physical facilities, and financial status were considered. A list in alphabetical order of the accredited curricula leading to degrees in engineering technology in the United States in 1968 is included in the text of the report. (BC)

ED039324

1968

CURRICULA LEADING TO DEGREES IN ENGINEERING TECHNOLOGY IN THE UNITED STATES

Accredited

by the Engineers' Council for Professional Development
345 East 47th Street, New York, N. Y. 10017

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Constituent Societies of ECPD

American Institute of Aeronautics and Astronautics, Inc.
American Institute of Chemical Engineers
American Institute of Industrial Engineers, Inc.
American Institute of Mining, Metallurgical and Petroleum Engineers
American Nuclear Society
The American Society of Agricultural Engineers
American Society of Civil Engineers
American Society for Engineering Education
The American Society of Mechanical Engineers
The Institute of Electrical and Electronics Engineers, Inc.
National Council of Engineering Examiners
Society of Automotive Engineers

The Engineering Institute of Canada—*Affiliate*
National Institute of Ceramic Engineers—*Affiliate*
National Society of Professional Engineers—*Affiliate*

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American Institute of Aeronautics and Astronautics, Inc.

Consolidated in 1963 from the American Rocket Society (founded 1930) and the Institute of the Aerospace Sciences (founded 1931). Membership (October, 1968)—32,500.
James J. Harford, Executive Secretary, 1290 Avenue of the Americas, New York, N.Y. 10019

American Institute of Chemical Engineers

Founded 1908. Membership (October, 1968)—33,523.
F. J. Van Antwerpen, Executive Secretary, 345 East 47th Street, New York, N.Y. 10017

American Institute of Industrial Engineers, Inc.

Founded 1948. Membership (October, 1968)—16,700.
Jack F. Jericho, Executive Director, 345 East 47th Street, New York, N.Y. 10017

American Institute of Mining, Metallurgical and Petroleum Engineers

Founded 1871. Membership (October, 1968)—41,572.
Joe B. Alford, Executive Director and Secretary, 345 East 47th Street, New York, N.Y. 10017

American Nuclear Society

Founded 1954. Membership (October, 1968)—6,457.
Octave J. DuTemple, Executive Secretary, 244 East Ogden Avenue, Hinsdale, Ill. 60521

The American Society of Agricultural Engineers

Founded 1907. Membership (October, 1968)—6,512.
J. L. Butt, Executive Secretary, 420 Main Street, St. Joseph, Mich. 49085

American Society of Civil Engineers

Founded 1852. Membership (October, 1968)—61,301.
William H. Wisely, Executive Secretary, 345 East 47th Street, New York, N.Y. 10017

American Society for Engineering Education

Founded 1893. Membership (October, 1968): engineering colleges—198; technical institutes—37; industrial—234; other institutional—121; individual—12,111.
W. Leighton Collins, Executive Secretary, 2100 Pennsylvania Avenue N.W., Washington, D.C. 20037

The American Society of Mechanical Engineers

Founded 1880. Membership (June, 1968)—54,760.
O. B. Schier, II, Executive Director and Secretary, 345 East 47th Street, New York, N.Y. 10017

The Institute of Electrical and Electronics Engineers, Inc.

Founded 1884. Consolidated in 1963 from AIEE and IRE. Membership (October, 1968)—135,941.
Donald G. Fink, General Manager, 345 East 47th Street, New York, N.Y. 10017

National Council of Engineering Examiners

Founded 1920. Membership (November, 1968)—331 Board Members of 54 Member Boards.
Number of legally registered or licensed professional engineers—242,000.
James H. Sams, Executive Secretary, Box 752, Clemson, S.C. 29631

Society of Automotive Engineers

Founded 1905. Membership (October, 1968)—26,297.
Joseph Gilbert, Secretary and General Manager, 2 Pennsylvania Plaza, New York, N.Y. 10001

The Engineering Institute of Canada (Affiliate)

Founded 1887. Membership (October, 1968)—17,892.
Pierre Bournival, General Manager, 2050 Mansfield Street, Montreal 2, Que., Canada

National Institute of Ceramic Engineers (Affiliate)

Founded 1938. Membership (October, 1968)—1,564.
Frank Reid, General Secretary, 4055 North High Street, Columbus, Ohio 43214

National Society of Professional Engineers (Affiliate)

Founded 1934. Membership (November, 1968)—66,481.
Paul H. Robbins, Executive Director, 2029 K Street N.W., Washington, D.C. 20006

Accredited Curricula Leading to Degrees in Engineering Technology in the United States—1968

I Objectives and Procedure

Organization and Objectives

In an effort to serve the public, industry and the engineering profession generally by stimulating the development of a better balanced system of technical education, the Engineers' Council for Professional Development in 1944 appointed a Subcommittee on Technical Institutes, later the Subcommittee on Engineering Technology Curricula, within the Council's Education and Accreditation Committee. On October 5, 1964, this subcommittee became a standing committee of ECPD. After several years of study, the subcommittee recommended and subsequently established a basis for accrediting programs of technical institute-type, now designated as Curricula in Engineering Technology. Diversity, both of programs and of types of institutions that offer them, made it difficult but imperative to set some limit on the type of curricula that would be considered. This was not done in an attempt to enforce unified standards which might tend to force these educational programs into stereotyped patterns. Instead, each curriculum is appraised in terms of quality and accredited in the light of its own purposes, content, and scope.

Instruction in the broad area of technical education that lies between professional engineering on one side and vocational education on the other is conducted by several types of institutions. Curricula in engineering technology offered by schools in the following categories may be considered by the committee:

Technical institutes, endowed or publicly supported.
Junior colleges.
Colleges of technology
Divisions of colleges and universities.
Proprietary schools, operated by individuals or corporations.

Curricula to be considered are technological in nature and lie beyond the high school level in the field of higher education. They differ in content and purpose from those of the vocational school on one hand and from those of the engineering college on the other. Curricula in this field are offered by a variety of institutions and cover a considerable range as to duration and content.

ECPD accreditation is based on compliance with minimum criteria established for curricula of not less than two academic years' duration. These criteria are applied regardless of the total length of the curriculum beyond the two academic years and thus are applicable to curricula which may lead either to the associate or baccalaureate degree.

These curricula have in common the following purposes and characteristics:

1. The purpose is to prepare individuals for various technical positions or lines of activity encompassed within the field of engineering, but the scope of the programs is more limited than that required to prepare a person for a career as a professional engineer.
2. Programs of instruction are essentially technological in nature, are based upon principles of science, and include sufficient college-level mathematics to provide the tools to accomplish the technical objectives of the curricula.
3. Emphasis is placed upon the use of rational processes in the principal fundamental portions of the curricula that fulfill the stated objectives and purposes.
4. Programs of instruction are usually more completely technological in content than engineering curricula, though they are concerned with the same general fields of industry and engineering. They normally lead to the appropriate associate or baccalaureate degree. Graduates of such programs are commonly designated as *engineering technicians* or *engineering technologists*.
5. Training for artisanship is not included within the scope of engineering technology education.

Definitions

1. *Engineering technology* is that part of the technological field which requires the application of scientific and engineering knowledge and methods combined with technical skills in support of engineering activities; it lies in the occupational spectrum between the craftsman and the engineer at the end of the spectrum closest to the engineer.

(a) Engineering technology is identified as a part of a continuum extending from the craftsman to the engineer. In this continuum engineering technology is located between the craftsman and the engineer, closer to the engineer. The term engineering technology is used to differentiate it from other types of technology—such as medicine and the biological sciences.

(b) Engineering technology is concerned primarily with the *application* of established scientific and engineering knowledge and methods. Normally engineering technology is not concerned with the development of new principles and methods.

(c) Technical skills such as drafting are characteristic of engineering technology. Engineers graduated from scientifically oriented curricula may be expected to have acquired less of these skills than previously and the engineering technician or engineering technologist will be expected to supply them.

(d) Engineering technology is concerned with the support of engineering activities whether or not the engineering technician or engineering technologist is working under the immediate supervision of an engineer. It may well be that in a complex engineering activity he would work under the supervision of an engineer, senior engineering technician, or a scientist.

2. An *engineering technician* or *engineering technologist* is one whose education and experience qualify him to work in the field of engineering technology.

(a) The term engineering technician is applied to the graduates of the associate degree programs and the term engineering technologist is applied to the graduates of the baccalaureate programs.

(b) ECPD does not wish to suggest job or position titles for use by employers. Position titles will vary from one employer to another and would normally be functional titles. ECPD recommends, however, that the generic term for those in this field be *engineering technicians* or *engineering technologists*.

(c) If the terms *engineering technician* and *engineering technologist* are restricted in their application to the upper portion of

the range between the craftsman and the engineer, considerable future confusion can be avoided.

(d) The adjective "engineering" should always be used since this provides differentiation from other types of technicians and technologists.

3. An *engineering technology curriculum* is a planned sequence of college-level courses, leading to an associate or baccalaureate degree, designed to prepare students to work in the field of engineering technology.

(a) The term *college-level* in the definition of an engineering technology curriculum indicates the attitude with which the education is approached, the rigor, and the degree of achievement demanded.

(b) Although throughout this presentation the generic term *engineering technology curriculum* is used for convenience, there are many specific branches of engineering technology in which curricula are offered. Commonly encountered are such curriculum titles as mechanical engineering technology, electronic engineering technology, architectural engineering technology, chemical engineering technology, and civil engineering technology.

Accrediting Policies and Procedures

Accrediting of curricula in engineering technology is accomplished under the following general policies:

1. Effective October 31, 1965, the Engineering Technology Committee of ECPD will consider for accreditation only curricula offered in an institution of higher learning that is accredited by the regional accrediting association, *unless* the regional accrediting association does not make provisions for the accreditation of specialized institutions. The Engineering Technology Committee *will* continue to accredit engineering technology curricula directly in institutions which, because of organizational structure, are not eligible for accreditation by the regional association.

(a) This requirement of regional accreditation will not apply to institutions offering currently accredited engineering technology curricula as long as any curriculum offered by the institution continues to meet all *other* ECPD accreditation requirements.

2. Only individual curricula are accredited, rather than institutions, for it is well recognized that curricula of quite different standards and objectives may be found at the same institution.

3. Curricula are considered with reference to possible accreditation only at the written request of the institution.

4. An institution desiring the accreditation of any or all of its curricula leading to degrees in engineering technology may communicate directly with the Engineering Technology Committee. This will activate established arrangements for ECPD to secure advance information by questionnaire, and toward an ultimate possible visitation by a regional team constituted for that particular visit.

5. Each visitation team normally will be headed by the chairman or vice-chairman of the region in which the requesting institution is located. Team personnel are carefully selected on the basis of the curricula to be considered, through listings and procedures established by ECPD for the purpose, appropriately representing the professional, technical and educational areas of ECPD'S constituent professional societies.

6. Accreditation may be granted only if students have been graduated from a curriculum, and employed before the date of action by the board of directors.

7. Rigid quantitative standards are to be avoided as a basis for accreditation. Well-planned experimentation and development in engineering technology education are to be encouraged.

8. Qualitative factors, as well as quantitative factors, are given careful consideration through a visitation by a competent team appropriately constituted according to the curricular pattern under consideration.

9. The findings and recommendations of the visitation team are reviewed by the Engineering Technology Committee and by the Engineers' Council for Professional Development at its annual meeting. When the visitation team has concluded its visit and submitted its report, the chairman of the Engineering Technology Committee will make available to the president of the institution a comprehensive summary of the findings of the visitation team.

10. Information supplied by the institution is for the confidential use of Engineers' Council for Professional Development and will not be disclosed without the written authorization of the chief administrative officer of the institution, or his designee.

11. A list of currently accredited curricula is published annually. No further information is available to any persons other than the chief administrative officer of the institution concerned or his designee.

12. The Engineering Technology Committee has been authorized by ECPD to recognize programs having "reasonable assurance of accreditation" and those programs to be considered as "candidates for accreditation."

An institution planning a new program may apply for recognition based upon the indication that they have a "reasonable assurance of accreditation."

An institution having a program underway with students enrolled, but not having achieved graduating classes, may apply for recognition as "candidates for accreditation."

(a) The institution is required to submit an appropriate report describing their situation fully.

(b) A visitation team will report its findings and recommendations to the chairman of the Engineering Technology Committee.

(c) The Engineering Technology Committee chairman is authorized, based upon the report, the findings, and the recommendations of the visitation team, to recognize the institution as having either "reasonable assurance of accreditation" or as a "candidate for accreditation."

(d) The institution at the end of one year is required to submit a comprehensive report as to its status and the Engineering Technology Committee is authorized to either continue or discontinue recognition, based upon this report.

(e) The institution is not authorized to publicize in any way its recognition as having reasonable assurance or as a candidate for accreditation. Notification of the status granted is sent to the United States Office of Education by the chairman of the Engineering Technology Committee.

(f) An institution having a program eligible for accreditation is not authorized to apply for reasonable assurance or candidate status.

Basis for Accrediting Curricula in Engineering Technology

General

The Engineering Technology Committee operates this accrediting program as a standing committee of Engineers' Council for Professional Development.

The purpose of accrediting shall be to identify those curricula which qualify for recognition as engineering technology curricula, and to identify the institutions which offer them.

In view of the diversification of engineering technology curricula, the types of institutions that offer them, and the undesirability of enforced uniformity, each curriculum will be recognized in terms of its own purposes, scope, duration, and content.

Separate examinations are conducted for curricula offered in the evening or in geographically separated branches of an institution. In addition, cooperative programs are examined as independent curricula.

Reference is made to the basic policies, definitions, and explanations contained in preceding sections.

The following general requirements are basic to the qualification of a curriculum in engineering technology for accreditation by ECPD:

1. *Duration.* Not less than two academic years of full-time resident academic work beyond the secondary school or the

equivalent in part-time resident academic work.

2. *Requirements for Admission.* High school graduation or the equivalent. A high school transcript indicating graduation, or satisfactory evidence and/or certification of equivalency, must be available for each student and indicate a sufficient background in mathematics and science to achieve the objectives of the curriculum.

3. *Curricula.* Technology in nature, employing the application of physical sciences and the techniques of mathematics to the solution of practical problems, and comprising a prescribed and integrated sequence of related courses in a specific field, though not excluding a reasonable amount of elective appropriate subject matter.

4. *Instruction.* By accepted class and laboratory methods. Laboratory work shall comprise an important part of each curriculum.

5. *Teaching Staff.* Qualified as to education and professional technical experience, and sufficient in numbers to provide adequate attention to each student.

6. *Educational Institution.* An organized school or a division of an institution devoted to the specific aim of providing engineering technology programs; a stable organization having adequate financial support and demonstrated capacity and achievement in the engineering technology field. The school shall demonstrably maintain a high standard of ethics in its educational program and in all its dealings with students and prospective students. In its correspondence, published materials, and other public announcements, the statements used shall be frank and factual and shall not be misleading.

7. *Physical Facilities.* Adequate for the purposes of the curricula offered.

Evaluative Criteria

Curricula are evaluated on the basis of both qualitative and quantitative criteria, the general scope of which is indicated in the following items:

1. *Qualitative criteria* include the following:
   - (a) Qualifications and experience of members of the faculty as well as the ratio of numbers of faculty to the numbers of students taught.
   - (b) Standard and quality of instruction:
     - (1) in technical courses.
     - (2) in basic scientific and other required courses.
   - (c) Progression and integration of courses and the manner and extent to which technical subject matter as taught will demand and utilize the student's training in communication, mathematical manipulation, and technical calculation.
   - (d) Scholastic work of students.
   - (e) Records of graduates; nature of and performance in employment.
   - (f) Attitude and policy of administration toward its engineering technology program.

2. *Quantitative criteria* include the following:
   - (a) Auspices, control, and organization of the institution and of its engineering technology division.
   - (b) Curricula offered.
   - (c) Graduation requirements; completion credentials awarded.
   - (d) Basis of and requirements for admission of students.
   - (e) Number of students enrolled:
     - (1) in the institution as a whole, and in its technical institute division.
     - (2) in the individual curricula.
   - (f) Teaching staff and teaching loads.
   - (g) Physical facilities devoted to technical institute curricula.
   - (h) Finances: investments, expenditures, sources of income.

3. An engineering technology curriculum acceptable to ECPD will normally be characterized by:
   - (a) At least the equivalent of one-half academic year of basic sciences, about half of which is mathematics and of which the mathematics includes *carefully selected topics* suited to each curriculum from appropriate areas of mathematics beyond college algebra and trigonometry, and including basic concepts of calculus.
   - (b) At least the equivalent of one-fourth academic year of non-technical subjects including oral and written communications, exclusive of courses in industrial organization and management, personnel administration, orientation, and physical education.
   - (c) At least the equivalent of one academic year of technical courses.
   - (d) The specifications listed in (a), (b), and (c) total less than the minimum period of two academic years required to achieve an integrated and well-rounded engineering technology curriculum. This additional time is available for the implementation of the educational objectives of the individual institution. Humanistic-social studies, for example, are acceptable additions to the curriculum.

4. The criteria above have as their objective the assurance of a minimum foundation for the preparation of an engineering technician. Building on this foundation, an institution may follow a variety of patterns in the remainder of the curriculum, such patterns being consistent with the objectives of the particular program and the overall aims of the institution. The minimum foundation insures sufficient emphasis upon the technical specialty courses which are the essence of any engineering technology curriculum.

5. ECPD-accredited engineering technology curricula may extend beyond the minimum standards of duration and quality. Curricular content beyond the minimum foundation may be planned for any one of several objectives, i.e. greater technical emphasis, increased liberal studies, management courses, etc.

6. The ECPD requires a high degree of specialization for engineering technology programs, but with field orientation rather than job orientation. The engineering orientation of this technical specialization should be manifest from faculty qualifications and course content.

7. The Engineering Technology Committee is prepared to examine for approval any college-level curriculum that appears likely to satisfy its criteria for an engineering technology curriculum. Curricula of a vocational pattern cannot qualify, nor can curricula of so specialized a pattern or so job-oriented as to provide an inadequate base for engineering technology.

A discussion of the philosophy of, and the guidelines for, engineering technology education may be found in reports and publications of the American Society for Engineering Education.

8. The Engineering Technology Committee will not recommend for accreditation as a curriculum in engineering technology any curriculum for which the claim is made that it produces qualified engineers. Caution and discretion must be exercised by institutions in all publications and references to avoid ambiguity or confusion between engineering technology and engineering. No curriculum will be approved for accreditation or reaccreditation unless the word *technology* is used as the final noun in the title.

9. The following policy applies to all publicity concerning ECPD accreditation:
   - (1) All references to ECPD accreditation of engineering technology programs must (a) avoid any confusion between engineering and engineering technology, (b) refer only to those curricula or programs which are currently ECPD-accredited, (c) not imply accreditation or endorsement of any non-accredited program or of an institution as a whole. ECPD accredits individual programs—not entire schools.
   - (2) An institution may cite the ECPD objectives in referring to ECPD accredited programs. Such a reference must be completely factual and professional in tone. The reference itself should include the following phrase:

"An ECPD-accredited engineering technology curriculum or program."

If accreditation is withdrawn, the institution shall no longer refer to the curriculum as accredited.

10. It is recommended that the term "engineering technician" be applied to the graduates of the associate degree programs in engineering technology and that the term "engineering technologist" be applied to the graduates of the baccalaureate programs.

Although it is recognized that each institution or each state has the authority to determine the names of degrees which are awarded, the following recommendations are presented for the purpose of unambiguous identification of the educational program of the graduate:

(1) It is recommended that the transcript and the diploma indicate clearly that the program is one in engineering technology.

(2) It is recommended that the degree designation include the term "engineering technology."

11. Assurance of accreditation and/or candidate for accreditation status is not to be publicized. Notification of this status is given to the United States Office of Education by the chairman of the Engineering Technology Committee simultaneously with the notification to the institution that the status has been granted.

Scope of Accredited List

ECPD is authorized by its constituent organizations merely to publish a list of accredited engineering technology curricula for use as desired by those agencies which require such a list. ECPD has neither the desire nor the authority to impose any restrictions or standardizations upon educational institutions. On the contrary, it aims to preserve the independence of action of individual institutions and to promote thereby the general advancement of engineering technology education.

This list includes only such of the curricula submitted to ECPD as have been judged by ECPD to be, first, distinctly engineering technology in purpose and organization of training and, second, of satisfactory quality to insure to their graduates a sound educational foundation for the practice of engineering technology. From time to time curricula intended to train for activities perhaps contiguous to engineering technology, but not training for the basic abilities of the engineering technician or engineering technologist as defined by ECPD, are submitted to ECPD for accrediting. Although recognizing that many of these are excellent programs serving worthy purposes, ECPD nevertheless declines to consider such curricula.

Accreditation of a curriculum is granted for a limited period, usually two, four, or six years, with reappraisal stipulated at the end of the period. Accreditation is based upon conditions as they exist at the time of evaluation and is granted only when conditions are considered as currently meeting minimum overall requirements. A comprehensive evaluation of the total engineering technology program under ECPD purview at an institution, including all engineering technology curricula and the supporting related offerings, will be held at intervals not exceeding six years. Interim accreditations of individual curricula will not normally extend beyond the next scheduled comprehensive evaluation and accreditation date. If for any reason the future appears precarious, or definite weaknesses exist which should be strengthened, accreditation may be denied or withdrawn, or may be granted for a shorter period, usually two or four years. Such precarious conditions include uncertainty as to financial status, uncertainty due to nature of administrative organization, need for additions to or improvements in staff or equipment, a new or changing curriculum, and undue dependence upon a single individual.

Provision for Review

The list of curricula which have been accredited by ECPD is revised annually.

The present listing, dating from October, 1968, is subject to revision in 1969. It replaces the published list dated October, 1967. Through its Engineering Technology Committee, ECPD will keep currently informed of significant changes in curricula, staff, facilities, organization, enrollment, and other pertinent factors, in institutions where engineering technology curricula currently are accredited.

Requests for further information relative to ECPD and the engineering technology accrediting program may be addressed to the Secretary, Engineers' Council for Professional Development, 345 East 47th Street, New York, N.Y. 10017.

II List of Accredited Curricula Leading to Degrees in Engineering Technology in the United States, 1968

The curricula of technical institute-type described in the following list have a wide range of objectives and content but have the common purpose of preparing students for immediate usefulness in industrial employment at levels intermediate between those served by the engineering college and by the vocational or secondary school.

Curricula designated as of technical institute-type are offered by institutions falling within a number of categories: technical institutes, endowed or publicly supported; junior colleges; colleges of technology; divisions of colleges and universities; proprietary schools, operated by individuals or corporations.

Accreditation is voluntary and accredited curricula as listed below denote that the administration of the institution concerned has specifically requested ECPD to evaluate these curricula in accordance with established policies and procedures for evaluating engineering technology curricula, and that each curriculum listed has been found satisfactory for the stated purpose it is designed to serve. Both the associate and baccalaureate degree programs include similar minimum criteria of 60 credit hours in engineering technology. Accreditation does not imply that the curriculum is equivalent in content and purpose to other curricula bearing the same or similar titles, or that credits earned in the curriculum are transferable to engineering programs. Users of the list are urged to refer to catalogs of the institution concerned for descriptions of the programs offered.

EXPLANATORY NOTES

(*a*) Accreditation applies to both day and evening curricula.
(*b*) Accreditation applies to day curriculum only.
(*c*) Accreditation applies to cooperative curriculum only.
(*d*) Accreditation applies to both the regular and cooperative curricula.
(*e*) Accreditation applies to evening curriculum only.
(*f*) Accreditation applies to the regular, cooperative, and evening curricula.
(*g*) Associate degree program.
(*h*) Baccalaureate degree program.
(*i*) Certificate.

Dates following the curriculum indicate the year of initial ECPD accreditation and/or periods of accreditation, if interrupted.

Academy of Aeronautics
(La Guardia Airport
Flushing, New York)
- Aircraft Design Technology [1947] *ag*
- Aircraft Electronics Technology [1950] *ag*
- Aircraft Maintenance Technology [1947] *ag*

Akron, University of
Community and Technical College
(Akron, Ohio)
- Electronic Technology [1968] *ag*
- Mechanical Technology [1968] *ag*

Alfred, State University Agricultural and Technical College at
(Alfred, New York)
- Air Conditioning Technology [1954] *bg*
- Construction Technology *bg* [1965]
- Diesel Gas Turbine Technology [1954] *bg*
- Electrical Technology—Electronic Communication Option [1954] *bg*
- Electrical Technology—Industrial Controls Option [1960] *bg*
- Mechanical Technology—Product and Machine Design Option [1954] *bg*

Brigham Young University
(Provo, Utah)
- Design and Drafting Technology [1967] *bh*
- Electronics Engineering Technology [1967] *bg*
- Manufacturing Technology [1967] *bh*

Bronx Community College
(Bronx, New York)
- Electrical Technology [1963] *ag*
- Mechanical Technology [1963] *ag*

Broome Technical Community College
(Binghamton, New York)
- Chemical Technology [1958] *bg*
- Civil Technology [1963] *bg*
- Electrical Technology [1958] *dg*
- Mechanical Technology [1958] *dg*

Canton, State University Agricultural and Technical College at
(Canton, New York)
- Construction Technology [1967] *bg*
- Electrical Technology [1950] *bg*
- Air Conditioning Technology [1953–1958; 1963] *bg*
- Mechanical Technology—Mechanical Design Option [1953] *bg*

Capital Institute of Technology
(Washington, D. C.)
- Electronic Engineering Technology [1946] *ag*

Central Technical Institute
(Kansas City, Missouri)
- Commercial Broadcast Technology [1949] *bi*
- Electronic Engineering Technology [1953] *bg*

City College of San Francisco
(San Francisco, California)
- Architectural Engineering Technology [1957] *bg*
- Design-Drafting Technology [1957] *bg*
- Electrical Engineering Technology [1957] *bg*
- Mechanical Engineering Technology [1957] *bg*
- Surveying and Mapping Technology [1957] *bg*

Cogswell Polytechnical College
(San Francisco, California)
- Electronics Engineering Technology [1955] *bg*
- Mechanical Engineering Technology [1951] *bg*
- Structural Engineering Technology [1951] *bg*

Dayton, University of
The Technical Institute
(Dayton, Ohio)
- Electronic Engineering Technology [1954] *bg*

Industrial Engineering Technology [1954] *bg*
Mechanical Engineering Technology [1954] *bg*
Technology [1968] *bh*

DeVry Technical Institute
(Chicago, Illinois)
Electronics Engineering Technology [1955] *bg*

Eastern New Mexico University
School of Technology
(Portales, New Mexico)
Civil Technology [1966] *bg*
Drafting and Design Technology [1966] *bg*

Embry-Riddle Aeronautical Institute
(Daytona Beach, Florida)
Aeronautical Engineering Technology [1958] *bg*

Erie County Technical Institute
(Buffalo, New York)
Chemical Technology [1959] *bg*
Civil Technology [1959] *bg*
Electrical Technology [1959] *bg*
Mechanical Technology [1959] *bg*

Farmingdale, State University Agricultural and Technical College at
(Farmingdale, New York)
Air Conditioning Technology [1965] *bg*
Automotive Technology [1965] *bg*
Chemical Technology [1965] *bg*
Civil Technology-Highway [1965] *bg*
Construction Technology-Building [1965] *bg*
Electrical Technology—Electronics [1965] *bg*
Mechanical Technology [1965] *bg*

Fayetteville Technical Institute
(Fayetteville, North Carolina)
Civil Engineering Technology [1967] *bg*
Electronics Engineering Technology [1967] *bg*
Sanitary Engineering Technology [1967] *bg*

Franklin Institute of Boston
(Boston, Massachusetts)
Architectural Engineering Technology [1968] *bg*
Electric Design Technology [1968] *bg*
Civil Engineering Technology [1949] *bg*
Electrical and Electronic Engineering Technology [1947] *bg*
Mechanical Engineering Technology [1949] *bg*

Gaston College
(Gastonia, North Carolina)
Civil Engineering Technology [1961] *bg*
Electrical Engineering Technology [1961] *bg*
Electronics Engineering Technology [1961] *bg*
Mechanical and Production Engineering Technology [1961] *bg*

Hartford State Technical College
(Hartford, Connecticut)
Electrical Technology [1955] *bg*
Mechanical Technology [1955] *bg*
Tool and Manufacturing Technology [1955] *bg*

Houston, University of
College of Technology
(Houston, Texas)
Air Conditioning Design Technology [1951] *bh*
Civil Technology [1965] *bh*
Drafting Technology [1955] *bh*
Electrical Technology [1951] *bh*
Electronic Technology [1951] *bh*
Mechanical Technology [1951] *bh*

Iowa State University
The Technical Institute
(Ames, Iowa)
Chemical Industries Technology [1967] *bg*
Construction Technology [1963] *dg*
Electronics Technology [1963] *bg*
Mechanical Technology [1963] *dg*

Lake Superior State College
(Sault Ste. Marie, Michigan)
Mechanical Engineering Technology [1967] *bg*

Milwaukee School of Engineering
(Milwaukee, Wisconsin)
Air Conditioning Engineering Technology [1949] *bg*
Computer Engineering Technology [1960] *bg*
Electrical Power Engineering Technology [1948] *bg*
Electronic Communications Engineering Technology [1948] *bg*
Fluid Power Engineering Technology [1966] *bg*
Industrial Engineering Technology [1957] *bg*
Internal Combustion Engines Engineering Technology [1966] *bg*
Metallurgical Engineering Technology [1960] *bg*

Mohawk Valley Community College
(Utica, New York)
Electrical Technology [1956] *cg*
Mechanical Technology [1956] *cg*

New Mexico State University
(Las Cruces, New Mexico)
Civil Engineering Technology [1968] *bg*
Electronic Engineering Technology [1968] *bg*
Mechanical Engineering Technology [1968] *bg*

Northrop Institute of Technology
(Inglewood, California)
Aerospace Engineering Technology [1947] *bi*
Aircraft Maintenance Technology [1955] *bi*
Electronic Engineering Technology [1960] *bi*

Norwalk State Technical College
(Norwalk, Connecticut)
Engineering Technology—Chemical [1965] *bg*
Engineering Technology—Electrical [1965] *bg*
Enigneering Technology—Eectromechanical [1965] *bg*
Engineering Technology—Mechanical [1965] *bg*
Engineering Technology—Tool and Manufacturing [1965] *bg*

Ohio College of Applied Science
(Cincinnati, Ohio)
Architectural Technology [1968] *cg*
Chemical Technology [1955] *cg*
Civil Engineering Technology [1963] *cg*
Electrical Engineering Technology [1953] *cg*
Electronic Engineering Technology [1963] *cg*
Mechanical Engineering Technology [1953] *cg*

Ohio Technical College
(Columbus, Ohio)
Electronics Engineering Technology [1963] *bg*

Oklahoma State University
The Technical Institute of the College of Engineering
(Stillwater, Oklahoma)
Construction Technology [1949] *bg*
Drafting and Design Technology [1949] *bg*
Electronics Technology [1949] *bg*
Fire Protection Technology [1949] *bg*

Oregon Technical Institute
(Klamath Falls, Oregon)
Electronics Engineering Technology [1958] *bg*
Engineering Drafting Technology [1963] *bg*
Highway Engineering Technology [1960] *bg*
Mechanical Engineering Technology [1963] *bg*
Structural Engineering Technology [1953] *bg*
Surveying Engineering Technology [1953] *bg*

Pennsylvania State University, The
(University Park, Pennsylvania)
Programs as offered at the following listed Commonwealth Campuses.
Drafting and Design Technology [1956] *bg*
Allentown Center
Altoona Campus
Beaver Campus
Behrend Campus (Erie)
Berks Center
DuBois Campus
Fayette Campus (Uniontown)
Hazleton Campus
McKeesport Campus
Mont Alto Campus
New Kensington Campus

Ogontz Campus (Philadelphia)
Schuylkill Campus
Worthington-Scranton Campus
Shenango Valley Campus (Sharon)
Wilkes-Barre Center
York Campus

Electrical and Electronics Technology [1956] *bg*
Allentown Center
Altoona Campus
Beaver Campus
Behrend Campus (Erie)
Berks Center
DuBois Campus
Fayette Campus (Uniontown)
Hazleton Campus
McKeesport Campus
New Kensington Campus
Ogontz Campus (Philadelphia)
Worthington-Scranton Campus
Shenango Valley Campus (Sharon)
Wilkes-Barre Center
York Campus

Manufacturing Technology [1967] *bg*
York Campus

Surveying Technology [1962] *bg*
Mont Alto Campus
Wilkes-Barre Center

Queensborough Community College of the City University of New York
(Bayside, New York)
Electrical Technology [1965] *ag*

RCA Institutes
(New York, New York)
Electronics Technology Course—T-3 [1963] *ai*

St. Petersburg Junior College
(St. Petersburg, Florida)
Electronics Technology [1964] *bg*
Mechanical Technology [1968] *bg*

Sinclair Community College
(Dayton, Ohio)
Mechanical Engineering Technology [1957] *fg*

Southern Technical Institute
Division of Georgia Institute of Technology
(Marietta, Georgia)
Air Conditioning Engineering Technology [1949] *bg*
Architectural Engineering Technology [1949] *bg*
Civil Engineering Technology—Surveying and Construction Option [1949] *bg*
Electrical Engineering Technology Electronics Option [1949] *bg*
Industrial Engineering Technology [1949] *bg*
Industrial Engineering Technology-Management Option [1963] *bg*
Mechanical Engineering Technology [1949] *bg*

Spring Garden Institute
(Philadelphia, Pennsylvania)
Electronics—Electrical Engineering Technology [1952–1962; 1965] *bg*
Mechanical Engineering Technology [1952–1962; 1965] *bg*

Texas at Arlington, University of
Technical Institute Division
(Arlington, Texas)
Aeronautical Technology [1959] *bg*
Civil Technology [1959] *bg*
Electrical Technology [1959] *bg*
Mechanical Technology [1959] *bg*

Thames Valley State Technical College
(Norwich, Connecticut)
Engineering Technology Chemical [1967] *bg*
Engineering Technology—Data Processing [1967] *bg*
Engineering Technology—Electrical [1967] *bg*
Engineering Technology—Mechanical [1967] *bg*
Engineering Technology—Tool and Manufacturing [1967] *bg*

Vermont Technical College
(Randolph Center, Vermont)
Electrical and Electronics Engineering Technology [1967] *bg*
Highway Engineering Technology [1965] *bg*
Instrumentation Engineering Technology [1967] *bg*
Mechanical Engineering Technology (Design Op.) [1967] *bg*
Mechanical Engineering Technology (Production Op.) [1967] *bg*

Waterbury State Technical College
(Waterbury, Connecticut)
Engineering Technology—Chemical [1967] *bg*
Engineering Technology—Data Processing [1967] *bg*
Engineering Technology—Electrical [1967] *bg*
Engineering Technology—Mechanical [1967] *bg*
Engineering Technology—Tool and Manufacturing [1967] *bg*

Weber State College
(Ogden, Utah)
Electronic Engineering Technology [1967] *bi*

Wentworth Institute
(Boston, Massachusetts)
Aeronautics and Space Engineering Technology [1966] *bg*
Aeronautical Technology [1957] *bi*
Architectural Engineering Technology [1946] *ag*
Building Construction Technology [1957] *bi*
Civil and Highway Engineering Technology [1960] *bg*
Electrical Engineering Technology [1946] *bg*
Electronic Engineering Technology [1952] *ag*
Electronic Technology [1966] *bi*
Machine Processes Technology [1957] *bi*
Materials Engineering Technology [1960] *bg*
Mechanical Design Engineering Technology [1946] *ag*
Mechanical Design Technology [1958] *bi*
Mechanical Power Engineering Technology [1946] *bg*
Nuclear Engineering Technology [1963] *bg*
Production Engineering Technology [1958] *bg*

FAITH OF THE ENGINEER

I AM AN ENGINEER. In my profession I take deep pride, but without vainglory; to it I owe solemn obligations that I am eager to fulfill.

As an Engineer, I will participate in none but honest enterprise. To him that has engaged my services, as employer or client, I will give the utmost of performance and fidelity.

When needed, my skill and knowledge shall be given without reservation for the public good. From special capacity springs the obligation to use it well in the service of humanity; and I accept the challenge that this implies.

Jealous of the high repute of my calling, I will strive to protect the interests and the good name of any engineer that I know to be deserving; but I will not shrink, should duty dictate, from disclosing the truth regarding anyone that, by unscrupulous act, has shown himself unworthy of the profession.

Since the Age of Stone, human progress has been conditioned by the genius of my professional forbears. By them have been rendered usable to mankind Nature's vast resources of material and energy. By them have been vitalized and turned to practical account the principles of science and the revelations of technology. Except for this heritage of accumulated experience, my efforts would be feeble. I dedicate myself to the dissemination of engineering knowledge, and especially to the instruction of younger members of my profession in all its arts and traditions.

To my fellows I pledge, in the same full measure I ask of them, integrity and fair dealing, tolerance and respect, and devotion to the standards and the dignity of our profession; with the consciousness, always, that our special expertness carries with it the obligation to serve humanity with complete sincerity.

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Automotive Engineering—5 Young Engineers. (Write: Society of Automotive Engineers, 2 Pennsylvania Plaza, New York, N. Y. 10001.)

Ceramic Engineering—For Career Opportunities Explore the Wonder World of Ceramics. (Write: NICE, 4055 North High Street, Columbus, Ohio 43214.)

Chemical Engineering—Chemical Engineering and You. (Write: AIChE, 345 East 47th Street, New York, N. Y. 10017.)

Civil Engineering—Is Civil Engineering for You? (Write: ASCE, 345 East 47th Street, New York, N. Y. 10017.)

Electrical and Electronics Engineering—Your Challenge in Electrical Engineering. (Write: IEEE, 345 East 47th Street, New York, N. Y. 10017.)

Industrial Engineering—The Profession With a Future. (Write: AIIE, 345 East 47th Street, New York, N. Y. 10017.)

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